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ABSTRACT

This study compared the level of reflection achieved by preservice versus inservice teachers. The study sample included 23 preservice teachers in a Master of Education program and 12 inservice teachers in a Master of Arts program. In the summer of 1996, the preservice teachers received a 3-hour training on reflective thinking and were involved in four reflective teaching lessons. The inservice group received no training because they were experienced teachers. During the fall quarter of 1996, all participants engaged in reflective journal writing. Both groups were asked to complete journal entries on class discussions. The preservice teachers were asked to reflect on what they learned from the previous class discussion and how it could be implemented in their future teaching. The inservice group reflected on what they learned on the topics addressed in the previous class session. The participants handed in their journal entries weekly. Analysis of the data indicated consistently that the inservice group achieved higher levels of reflection than the preservice group, even though they received no training on reflective thinking. However, they did not achieve the highest level of reflection possible and tended to be at an intermediate level of reflection. (Contains 4 tables and 19 references.) (SM)

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WHO IS MORE REFLECTIVE? INSERVICE OR PRESERVICE TEACHERS?

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WHO IS MORE REFLECTIVE? INSERVICE OR PRESERVICE TEACHERS?

Objective

The objective of this study is to compare the level of reflection that preservice achieved versus that achieved by inservice teachers.

Theoretical Framework

Canning (1991) states that Dewey was the one who initiated a whole line of thinking on reflection since the beginning of the century. Ross (1989) defines reflection as a "way of thinking about educational matters that involves the ability to make rational choices and to assume responsibility for those choices" (p. 22).

By "helping teachers to think about what happened, why it happened, and what else they could have done to reach their goals" (Cruickshank & Applegate, 1981, p. 553), they are being involved in conscious reflective thinking. In this way, teachers and/or preservice teachers question their own actions "What am I doing and why" (Valverde, 1982, p. 86). Sparks-Langer and others consider that asking the question "why" is essential in the development of reflection in preservice teachers (1990). Kuhn (1986) asserts that "the only way to improve teacher's thinking is to involve them in it" (p. 502), that is, that in order to turn teachers into reflective practitioners, they must be required to reflect through exercises.

Reflectivity is the ability every person has to reflect about specific problems as well as to arrive to appropriate solutions considering ethical and societal values (Bullough, 1989). Volkman, Scheffler and Dana highlight that Wellington (1991) defined reflectivity as "the ability to look back at the teaching and learning that has occurred and engage in a cycle of thought and action based on professional experiences" (1992, p. 3). Bainer and Cantrell complement Wellington's definition by

stating that it is "the ability to assess situations and to make thoughtful, rational decisions" (1993, p. 65). Reflectivity can help teachers and/or preservice teachers to (1) improve their teaching performance (Cruickshank, 1985), (2) develop their own philosophy of education (Cruickshank, 1985), and (3) strengthen their self-image (Canning, 1991). Zumwalt (1982) defines teaching as the process through which teachers (or preservice teachers) think about what they do.

Sparks-Langer and others (1990) believe that reflective teachers should be able to link theory with practice, that is, "to apply educational principles and techniques within a framework of their own experience, contextual factors, and social and philosophical values" (p. 24). Therefore, a reflective practitioner is the one who relates theory to practice, and tries to balance learning styles and teaching styles/strategies/methods with content (Rust, 1988).

Roth states that the reflective practitioner must be engaged in the process of inquiry. "Inquiry-oriented teacher education is essential to the preparation of reflective practitioners" (1989, p. 31). The essential element of inquiry is the concept of the problematic (1989). Therefore, teachers as reflective practitioners are characterized by their thoughtfulness in the process of solving problems as well as modifying and improving their understanding of professional practice. In this way, their understanding is being reconstructed permanently in the past-present-future continuum of classroom events (Copeland and others, 1993). "The goal of reflective practice does not stop with the teacher; it is ultimately concerned with student outcomes" (Copeland, 1993, p. 353). Copeland and others (1993) identify 12 critical attributes of reflective practice which determine to what extent teachers do engage in the process of reflection.

Killion and Todnem (1991) reported that the teachers who participated in a workshop in which they were involved in reflective activities, asserted that "reflection was a rich source of continued personal and professional growth" (p. 14), and "reflection offers me a phenomenal self-confidence, unity of purpose, and sense of direction in my teaching role. Now I want my students to become reflective thinkers" (p. 16). It was also stated that

> "Busy people typically do not engage in reflection. They rarely treat themselves to reflective experiences, unless they are given some time, some structure, and the expectations to do so.
>
> As professionals, we owe ourselves this opportunity for renewal and revival. Reflection is a gift we give ourselves, not passive thought that lolls aimlessly in our minds, but an effort we must approach with rigor, with some purpose in mind, and in some formal way, so as to reveal the wisdom embedded in our experience. Through reflection, we develop context-specific theories that further our own understanding of our work and generate knowledge to inform future practice" (p. 14).

Methodology

This study is exploratory in nature. It has attempted to systematically analyze the reflection that preservice teachers have achieved versus inservice teachers.

Subjects

The sample was constituted by 23 preservice teachers in a Masters of Education program: four males and nineteen females, and 12 inservice teachers in a Master of Arts program: one male and 11 females. Both groups of students were enrolled at same mid-western university. The preservice group was constituted by 10 subjects who were considered traditional students and thirteen were non-traditional. The inservice group was constituted by non-traditional students who had an average of 10 years of teaching experience.

Instruments

The subjects involved in the study engaged in reflective journal writing during fall quarter of 1996. The preservice group were enrolled in a Social Studies methods course and the inservice group in a Multicultural course. The level of reflection was analyzed with the following instruments: "Assessment for Levels of Reflection" (Galvez, 1995), "Framework for Reflective Thinking" (Sparks-Langer and others, 1990), and Van Manen's "Levels of Reflectivity of Deliberative Rationality (1991) to determine levels of reflection. Zeichner and Liston's "Conceptual Framework for Analyzing Practical Reasoning" (1985) was used to analyze the discourse employed by the subjects.

Orientation for Subjects

The preservice group was trained during summer quarter of 1996. The training lasted a 3-hour session that consisted of: (a) a discussion on a literature review on reflection, reflective thinking and reflective practitioner, (b) the role of reflection in the learning process which included Kolb and Fry's (1975) model (Troyer, 1988), (c) cognitive processes involved in reflection (Troyer, 1988), (d) the importance of reflecting on classroom situations following Cruickshank's (1985) model of Reflective Teaching (Troyer, 1988), and (e) Reflective Teaching was developed theoretically (its foundations and practice were explained) and practically. These subjects were also involved in four Reflective Teaching Lessons. The inservice group did not receive any training as they were experienced teachers.

Both groups were asked to complete journal entries on class discussions. The preservice group were given two questions to answer in their journals: they were to reflect on what they learned from the previous class session and how it can be implemented in their future teaching. The inservice

group was just asked to reflect on what they learned on the topics addressed inthe previous class session. These journal entries were handed in weekly.

Data Collection and Analysis

The author was the instructor for both groups. Journal entries were collected at a weekly basis. All journals were scored by two raters who were trained in the use of the four instruments. The raters were trained in the use of each instrument over a period of 5 hours which were split in two sessions. The inter-rater reliability was determined by Cronbach's alpha = 0.95, which revealed a high inter-rater reliability.

A One Factor Repeated Measures ANOVA was used to analyze the data sets and triangulate the several instruments on class discussions. Triangulation was performed through the use of multiple instruments to analyze the levels of reflection the subjects achieved. Member check took place after the data was rated.

Results

A one way ANOVA, summarized in Table 1 was performed on a one factor repeated measures design based on the achieved levels of reflection by group and rater.

Insert Table 1 about here

An examination of Table 1 revealed that the computed test statistic $F(1,68) = 18.62$, $p<.001$, was statistically significant. This indicated that the inservice group achieved higher levels of reflection than the preservice group, which was corroborated by the means (Preservice group=2.54; Inservice

group=4.13). The means revealed that the preservice group was reflecting at a merely descriptive level (level 2) meanwhile the inservice group was reflecting from the teacher's perspective (level 4).

A one way ANOVA, summarized in Table 2 was performed on a one factor repeated measures design based on the achieved levels of reflection by group and rater.

Insert Table 2 about here

An examination of Table 2 revealed that the computed test statistic $F(1,68) = 49.94$, $p < .001$, was statistically significant. This indicated that the inservice group achieved higher levels of reflection than the preservice group, which was corroborated by the means (Preservice group=2.48; Inservice group=4.54). The means revealed that the preservice group was reflecting at a simple descriptive level (level 2) meanwhile the inservice group was reflecting by providing rationales that related to a personal preference (level 4).

A one way ANOVA, summarized in Table 3 was performed on a one factor repeated measures design based on the achieved levels of reflection by group and rater.

Insert Table 3 about here

An examination of Table 3 revealed that the computed test statistic $F(1,68) = 11.94$, $p < .001$, was statistically significant. This indicated that the inservice group achieved higher levels of reflection than the preservice group, which was corroborated by the means (Preservice group=1.39; Inservice

group=1.92). The means revealed that the preservice group was reflecting at technical rationality level (level 1) meanwhile the inservice group was almost at the practical action level (level 2). This could be due to the fact that the inservice group was moving from level 1 to level 2.

A one way ANOVA, summarized in Table 4 was performed on a one factor repeated measures design based on the achieved discourse by group and rater.

Insert Table 4 about here

An examination of Table 4 revealed that the computed test statistic $F(1,68) = 179.55$, $p < .001$, was statistically significant. This indicated that the inservice group achieved higher levels of discourse than the preservice group, which was corroborated by the means (Preservice group=1.37; Inservice group=3.38). The means revealed that the preservice group was reflecting at the factual discourse level (level 1), almost at the sublevel explanatory/hypothetical discourse (sublevel 4), that is that they were moving from the sublevel hermeneutic discourse (sublevel 3) to the sublevel explanatory/hypothetical discourse (sublevel 4). The inservice group was reflecting at the justificatory discourse level (level 3) at the sublevel extrinsic rationale (sublevel 3).

The results mentioned above, showed to be consistently significant across the four different frameworks. This suggested that inservice teachers tended to be more reflective than preservice teachers.

Conclusions

Inservice teachers achieved higher levels of reflection in each of the frameworks used in this study. Even though the inservice teachers group did not receive training on reflection and reflective thinking, they were more reflective regardless of the framework. This may be due to the fact that inservice teachers are experienced classroom teachers, therefore they tend to be more reflective.

It is worth to mention that even though inservice teachers were more reflective than preservice teachers, they did not achieve the highest level of reflection in any of the frameworks used. Overall, they were at an intermediate level of reflection in each of the frameworks. Then, the results of this study indicate that it can not be assumed that inservice teachers because of their classroom experience are at the highest level of reflection.

More research needs to be done in analyzing the reflection of inservice teachers to examine why they are not as reflective as one might expect. Specific variables need to be identified to explain what factors are hindering their achievement at the highest levels of reflection.

Table 1

One factor repeated measures analysis of variance on Galvez's levels of reflection per treatment and rater

Source	df	SS	MS	F	P
A (Pre vs Ins)	1	39.45	39.45	18.62	0.0001
S(A) Error	68	144.04	2.12		
Total	69	183.49			

Pre vs Ins=Preservice versus Inservice

Table 2

One factor repeated measures analysis of variance on Sparks-Langer and others' levels of reflection per treatment and rater

Source	df	SS	MS	F	P
A (Pre vs Ins)	1	67.15	67.15	49.94	0.0001
S(A) Error	68	91.44	1.35		
Total	69	158.59			

Pre vs Ins=Preservice versus Inservice

Table 3

One factor repeated measures analysis of variance on Van Manen's levels of reflection per treatment and rater

Source	df	SS	MS	F	P
A (Pre vs Ins)	1	4.35	4.35	11.94	0.0001
S(A) Error	68	24.79	0.37		
Total	69	29.14			

Pre vs Ins=Preservice versus Inservice

Table 4

One factor repeated measures analysis of variance on Zeichner and Liston's discourse analysis per treatment and rater

Source	df	SS	MS	F	P
A (Pre vs Ins)	1	64.10	64.10	179.55	0.0001
S(A) Error	68	24.27	0.36		
Total	69	88.37			

Pre vs Ins=Preservice versus Inservice

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